

Ashwin Shankar Umasankar

919-637-3261 | aumasan@ncsu.edu | LinkedIn/AshwinShankar | GitHub | Portfolio | Raleigh, NC

EDUCATION

North Carolina State University, Raleigh, NC || Master of Science, Computer Science Anticipated May 2023
Courses: Software Engineering, Design and Analysis of Algorithms, Automated Learning and Data Analysis GPA:3.8/4.0

National Institute of Technology, Tiruchirappalli, India || Bachelor of Technology, Computer Science May 2020
Courses: Algorithms, Machine Learning, Operating Systems, Data Structures, Compiler Design, DBMS GPA:8.2/10

SKILLS

Languages: C++, Python, HTML, CSS, JavaScript, Node.js, React.js, Express

Databases and Operating Systems: MySQL, MongoDB, MacOS, Windows, Ubuntu

Computer Networks: TCP/IP, HTTP, IPv4, SSH, Socket Programming,

Tools/Frameworks: GIT, REST API's, Docker, Cloud Platforms (AWS, GCP), TensorFlow, Firebase

WORK EXPERIENCE

Data Scientist, Hiperautomotive, Bangalore, India July 2020 – May 2021

- Devised a pipeline that manipulates the raw sensor values utilizing efficient algorithms and pushes them onto the **AWS RDS** server in real-time.
- Performed data **analysis** and deployed a dashboard for data **visualization**. Performed feature engineering to enhance model performance using algorithms like **LSTM**, **RandomForestRegressor**.
- Assisted in increasing the customer base by **400%** in 6 months.

Research Assistant (NLP Team), IIIT-Hyderabad, India May 2019 – July 2019

- Performed Post-processing on the data that the machine translation software (ANUSARA) returns.
- Developed custom **docker** images for the **Neural Machine Translation** models to make it system independent.
- Conducted Seminars on introducing the basics of LISP to a group of 10 research students. Concepts like Parse Tree, Gold Treebank, Universal Dependency data were also examined.

PROJECTS

Web Development (Netflix Clone)

- Built a **React** application that simulates the Netflix web application and fetches data dynamically from **TMDB API**.
- Deployed using **Firebase** hosting.

Web Development (Tinder Clone)

- Built a React application that simulates the Tinder app.
- Provisioned the backend with **MERN** (MongoDB, Express, React, Node) stack and deployed on Heroku.

Software Engineering (Write Right Chrome Extension)

- Developed a writing assistant that provides meanings, synonyms, antonyms, pronunciation etc for the word that is highlighted on any webpage.

Software Engineering (TeachersPet Discord Bot)

- Designed a **discord bot** that provides various useful features/commands for classroom maintenance.
- Implemented continuous integration using **GitHub Actions** and deployment in **Heroku**.

Machine Learning (Diabetes detection)

- Determine the accuracy of various machine learning algorithms (**Random Forest**, **SVM**, **Linear Regression**) on PIMA Indian diabetes Dataset in **Python**.
- Implemented different preprocessing methods like **rescaling**, **standardization**, **Normalization** and **PCA** for feature selection to optimize the results.

Machine Learning (Custom Object Detection)

- Designed a dashboard using **Python** that runs a custom trained **YOLOv3 model**.
- Developed an elaborate feedback system for retraining the model with custom data and parameters.

Machine Learning and NLP (Twitter Sentiment Analysis)

- Developed a script in **Python** that observes the live twitter data using the **Twitter API** and classifying them into positive/negative public review using a trained **NLTK model**.

PUBLICATIONS

Extractive Text Summarization using Dynamic Clustering and Co-Reference on BERT (2020 5th ICCCS)

- Designed an algorithm that produces summaries of higher quality by incorporating **reference resolution** and dynamically deciding the suitable size for the summary using **BERT**.